

## Key indicators for monitoring and evaluation of HRH

Indicator	Description	Numerator	Denominator	Potential data sources	Comparability issues
<b>Health services provision function</b>					
Stock of HRH	Proportion of HRH among the total population	Number of health workers	Total population	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other representative household survey</li> <li>• Routine administrative records</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Distinction between head-count (number of persons counted at a given moment) and full-time-equivalent (job positions counted and weighted on the basis of actual or usual working hours)</li> </ul>
		Number of health workers of economically active age	Total population of economically active age		
Skills mix	Distribution of health workers with a given occupation, specialization or other skill-related characteristic among the total health workforce (and compared to other category of workers)	Number of health professionals	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Representative facility/provider survey</li> <li>• Routine records</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Distinction between head-count and full-time-equivalent (with attention to definition of full-time hours)</li> </ul>
		Number of physicians	Number of nurses and midwives		
		Number of medical specialists	Number of medical generalists		
Migration status	Proportion of foreign-born or foreign-trained health workers in the total health workforce	Number of health workers who were born in a foreign country	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Facility/ provider survey</li> <li>• Routine records</li> <li>• Special studies on migration (registries of work permits/entry visas)</li> </ul>	<ul style="list-style-type: none"> <li>• Consistency in occupational and educational classification between the country of origin and the receiving country</li> </ul>
		Number of health workers who received their academic training in a foreign country	Total number of health workers		
Labour force activity	Proportion with health-related skills active in the labour force, currently employed, or currently working in a health-related industry	Number with health-related skills active in the labour force	Total number with health-related skills of economically active age	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational, industrial and educational classifications</li> <li>• Definition of age range for economic activity</li> </ul>
		Number with health-related skills currently employed	Total number with health-related skills active in the labour force		
		Number with health-related skills currently working in a health-related industry	Total number with health-related skills currently employed		

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Institutional sector	Proportion of health workers engaged in the private sector	Number of health workers employed in the private sector	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Facility/ provider survey</li> <li>• Routine records</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Distinction between operating authority of the place of work and person's employment status</li> </ul>
Income / earnings	Relative income/earnings among health workers	Average annual income, occupational earnings or hourly wages among health workers	Average annual income, occupational earnings or hourly wages among all workers in the labour force	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Routine records</li> <li>• Special studies on personal income (such as income tax records)</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Distinction between net and gross income, and between sources of income (including informal sources)</li> <li>• Definition of reference period for income reporting</li> </ul>
Distribution of HRH by location / gender / other	Proportion of health workers working in a given geographical location, being female, or having another specific characteristic among the total health workforce	Number of health workers working in urban areas (or other epidemiological or economic region)	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Facility/provider survey</li> <li>• Routine records</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Definition of urbanity or other geographical delimitation</li> </ul>
		Number of health workers who are female	Total number of health workers		
Gender gap in income / earnings	Ratio of women's to men's income/earnings in the health workforce	Average annual income, occupational earnings or hourly wages among female health workers	Average annual income, occupational earnings or hourly wages among male health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Facility/provider survey</li> <li>• Routine records</li> <li>• Special studies on personal income (such as income tax records)</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational classification</li> <li>• Distinction between net and gross income, and between sources of income</li> <li>• Definition of reference period for income reporting</li> </ul>
Provider productivity	Relative number of specific tasks performed over a defined period of time among health workers	Average number of specific tasks performed over a defined period of time (ambulatory visits, immunizations, surgeries, etc.) by a given health care provider	Total number of specific tasks performed over the same period of time among all health care providers (or other standard)	<ul style="list-style-type: none"> <li>• Facility/provider survey</li> <li>• Routine records (facility- or provider-based)</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational and industrial classifications</li> </ul>

Indicator	Description	Numerator	Denominator	Potential data sources	Comparability issues
<b>Resource generation function</b>					
Renewal and loss of HRH	Ratio of new arrivals to the health workforce	Number of new entrants or graduates at health training institutions	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Surveys or routine records of health training institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational and educational classifications</li> <li>• Distinction in average length of training program or average age at completion</li> </ul>
		Number of health workers aged 30 years or less (or other age group)	Total number of health workers		
Education and training	Proportion of health workers with tertiary-level educational attainment among the total health workforce	Number of health workers with tertiary-level educational attainment (or other level)	Total number of health workers	<ul style="list-style-type: none"> <li>• Census</li> <li>• Labour force or other household survey</li> <li>• Facility/provider survey</li> <li>• Routine records</li> </ul>	<ul style="list-style-type: none"> <li>• Occupational and educational classifications</li> </ul>
	Proportion of health workers having undertaken continuous education program within a given period of time among the total health workforce	Number of health workers having undertaken continuous education program within a given period of time	Total number of health workers		
Distribution of health education entrants by location / gender / other	Proportion of entrants at health training institutions having a specific characteristic	Number of entrants at health training institutions from rural or poor areas	Total number of entrants at health training institutions	<ul style="list-style-type: none"> <li>• Surveys or routine records of health training institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Educational classification</li> <li>• Definition of geographical delimitation</li> </ul>
		Number of entrants at health training institutions who are female	Total number of entrants at health training institutions		
Costs of training	Average health training cost per student	Total costs (fixed and renewable) for a given academic program at health training institutions	Total number of students enrolled in the same academic program at health training institutions	<ul style="list-style-type: none"> <li>• Surveys or routine records of health training institutions</li> </ul>	<ul style="list-style-type: none"> <li>• Educational classification</li> <li>• Distinction between types of costs, and average length of training program</li> </ul>